

Appl No. 09/943,232  
Amdt. dated Aug. 3, 2005  
Reply to Office action of May 3, 2005

### **REMARKS/ARGUMENTS**

The applicant would like to acknowledge, with thanks, the Office action mailed by the examiner on May 3, 2005. This amendment and response are responsive to this office action.

By this amendment, claims 1-2, 6-8 have been amended, claims 4-5 and 9-10 have been cancelled, and claims 11-17 are new. Claims 11-12 do not contain new matter as the concurrent operation of the adaptive array the omni directional antenna is disclosed on page 9, lines 17-20 of the original specification. Claims 13-18 do not contain new matter as the subject matter of these claims is disclosed on page 9, lines 1-23 of the original specification.

#### **Claim Objections**

Claims 2 and 7 were objected to because the term "domain" should be changed to "division." Accordingly, this informality has been corrected by this amendment.

Claims 8-10 were objected to because they depended from claim 1 instead of claim 6. Accordingly, this informality has been corrected for claim 8 by this amendment; claims 9-10 have been cancelled.

#### **Claim Rejections under 35 U.S.C. § 103**

Claims 1 and 6 stand rejected as being obvious based on the combination of U.S. Patent 6,768,913 to Molner et al. (*hereinafter* Molnar) and U.S. Patent No. 6,836,484 to Suzuki (*hereinafter* Suzuki). Claims 2, 4, 5, 7, 9 and 10 stand rejected as being obvious based on the combination of Molnar, Suzuki and U.S. Patent No. 6,816,7706 to Hohnstein (*hereinafter* Hohnstein). Claims 3 and 8 stand rejected as being obvious based on the combination of Molnar, Suzuki and U.S. Patent No. 6,671,495 to Lappetelainen (*hereinafter* Lappetelainen). Withdrawal of these rejections is requested for reasons that will now be set forth.

Claims 1, 6 and 13 recite a multi-carrier system, such as OFDM, wherein one or more of the carriers are used by an access point in conjunction with an omni-directional antenna, while the other carriers are used by the access point in conjunction with an adaptive antenna. This approach allows the simultaneous use of omni and directional (adaptive array) antennas. The carriers used in conjunction with the directional antennas can be utilized for exchanging data with associated clients while the carrier used in conjunction with the omni-directional antenna can be used for detecting and handling new client associations. This preserves established client-

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access point connections. Thus, even though the directional antenna of an access point may be pointing away from a new client entering a cell or directing a null towards a new client entering a cell, the new client can employ the carrier frequency being used by the omni-directional antenna to associate with the access point.

By contrast, Molnar is for a radio communications system that includes a base station having a directional antenna for generating a plurality of beams. A first set of beams is used to receive signals which are decoded at the base station. A second set of beams is used for interrogating a cell to identify beams which should be added to the first set of beams. Molnar does not teach using a plurality of frequencies, wherein a selected one of the plurality of frequencies is serviced by an omni-directional antenna while the remaining carriers are serviced by an adaptive array antenna as currently recited in claims 1 and 6 (see for example Figs 2, 4, 7, and/or 11).

The aforementioned deficiency in Molnar is not remedied by any teaching of Suzuki. Suzuki teaches that a plurality of subcarriers can be used for dedicated carriers, However, Suzuki does not teach that some subcarriers are transmitted/received on an omni-directional antenna while other subcarriers are transmitted/received by an adaptive array and thus does not remedy the aforementioned deficiency in Molnar.

The aforementioned deficiency in Molnar and Suzuki is not remedied by any teaching of Hohnstein is directed to a wireless access point that wirelessly communicates with a plurality of clients as well as wirelessly communicating with the network as opposed to a wired connection. Hohnstein teaches an access point that has at least one antenna for communicating with a plurality of wireless subscriber units and at least one backhaul antenna that interconnects the wireless access point. By contrast, claims 1, 6 and 13 recite that both antennas are used for communicating with clients.

The aforementioned deficiency in Molnar, Suzuki and Hohnstein is not remedied by any teaching of Lappetelainen. Lappetelainen teaches a method for measuring the strength of a radio signal. The examiner relies on Lappetelainen for teaching that an access point can have an adaptive directional antenna. However, Lappetelainen does not teach that an access point can have both an adaptive directional antenna and an omni-directional antenna.

Therefore, for the reasons just set for above, neither Molnar, Suzuki, Hohnstein nor Lappetelainen, alone or in any combination thereof, teach suggest or show an access point that

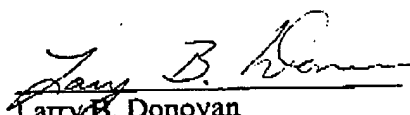
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uses both an adaptive array system and an omni-directional system as recited in claims 1, 6 and 13. Claims 2-3, 11 are directly dependent from claim 1, claims 6-8, 12 are directly dependent from claim 5 and claims 14-18 are directly dependent from claim 13 and therefore contain each and every element of claim 1, 5 and 13 respectively. Therefore, for the reasons already set forth for claims 1, 5 and 3, claims 2-3 and 6-8 and 14-18 are not obvious based on Molnar, Suzuki, Hohnstein nor Lappetelainen, either alone or in combination.

If there are any fees necessitated by the foregoing communication, please charge such fees to our Deposit Account No. 50-0902, referencing our Docket No. 72255-05858.

Respectfully submitted,  
TUCKER, ELLIS & WEST

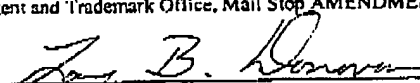
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### FACSIMILE CERTIFICATION UNDER 37 C.F.R. §1.8

I hereby certify that, on the date shown below, the accompanying correspondence (along with any other paper referred to as being attached or enclosed) is being transmitted via Facsimile No.: (571) 273-8300, to The Patent and Trademark Office, Mail Stop AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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DATE: August 3, 2005